

REMARKS

Claims 2-7 are pending in this application. By this Amendment, claim 1 is canceled, claim 2 is amended to incorporate the subject matter of original claim 1, claim 3 is amended to include the subject matter of claim 1 and to further clarify the temperature of which the alloy film is formed, claim 4 is amended to change its dependency from canceled claim 1 to pending claim 2 and for clarity, and claims 5-7 are added. No new matter is added by this Amendment. Support for claim 5 is found in original claims 1 and 2. Support for new claim 6 is found in original claims 1 and 3. Support for claim 7 is found in original claim 4.

I. Specification

The Office Action objects to the title as not being descriptive. Applicants respectfully disagree. Nonetheless, to expedite allowance of the application, the title is herein amended as suggested by the Patent Office. Thus, the requirements of the Patent Office are met.

II. Rejection Under 35 U.S.C. §102(e)

Claims 1, 3 and 4 are rejected under 35 U.S.C. §102(e) over U.S. Patent Publication No. 2003/0175425 (Tatsumi). This rejection is respectfully traversed.

Claim 1 is canceled. Thus, with respect to claim 1, this rejection is moot. Claim 4 is amended to change its dependency from canceled claim 1 to pending claim 2. Claim 2, as acknowledged by the Patent Office, is not anticipated by Tatsumi. Thus, the rejection of claim 4 is also moot.

Claim 3 is herein amended to include the features of claim 1.

The Office Action asserts that Tatsumi teaches all the features of original claim 1. The Office Action also cites paragraph 52 of Tatsumi when asserting that Tatsumi teaches forming the alloy film at about 400°C or less, as recited in claim 3.

Tatsumi discloses setting the temperature of the substrate to be between 350°C and 700°C, preferably between 390°C and 600°C. Furthermore, Tatsumi recites that it is best to

precedently supply Pb at 450°C or less in view of resistance of the aluminum wiring.

However, it would be impossible to reduce scattering of Pb which is caused by oxidation of Pb within the temperature range disclosed in Tatsumi.

Unlike Tatsumi, claim 3 of the present application is directed to a method of reducing scattering of Pb which is caused by oxidation of Pb and does not take into account crystallization of PZT and resistance of an aluminum wiring. These features are supported by the specification in that the specification states that it is desirable to set the temperature of the substrate at about 150°C.

More specifically, claim 3, as well as claim 6, recites forming an alloy film of Pb and Pt on the metal film, at about 150°C forming initial crystal nuclei of a lead titanate (PbTiO_3) on the alloy film, and forming a crystal grown layer of the complex oxide of PZT family on the initial crystal nuclei. As discussed above, these features are not taught, suggested or disclosed by Tatsumi.

For the foregoing reasons, claims 3 and 6, as well as claim 7 depending from claim 3, are not anticipated nor rendered obvious by Tatsumi.

III. Rejection Under 35 U.S.C. §103(a)

Claim 2 is rejected under 35 U.S.C. §103(a) over Tatsumi in view of U.S. Patent No. 5,714,194 (Komai). This rejection is respectfully traversed.

The Office Action asserts that Tatsumi discloses all of the features of claim 1 but fails to teach forming the alloy film in an inert gas atmosphere, as recited in original claim 2, and as similarly recited in claim 5.

The Office Action asserts Komai as disclosing an alloy film formed in an inert gas atmosphere. Applicants respectfully disagree with this assertion.

The Office Action bases its assertion on Komai teaching supplying a material gas as Ar carrier gas. Although Komai teaches supplying Ar carrier gas, Komai fails to disclose an

alloy film formed in an inert gas atmosphere. In particular, Komai recites "after the substrate is raised to the intended temperature, oxygen gas is supplied to the reaction chamber 5 at a flow rate of 800 SCCN". See col. 3, lines 52-55 of Komai. Thus, Komai merely discloses a method of supplying a material gas as Ar carrier gas under oxygen atmosphere. In contrast, original claim 2 of the presently claimed invention is directed to a method in which oxygen gas is not supplied upon forming an alloy film, and an alloy film is formed in a complete inert gas atmosphere. That is, Komai fails to disclose forming an alloy film in an inert gas atmosphere, as recited in claim 2, and as similarly recited in claim 5.

For the foregoing reasons, claims 2 and 5, as well as any claims depending therefrom, are not anticipated or rendered obvious by Tatsumi and/or Komai. Withdrawal of the rejection is respectfully requested.

IV. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the pending claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:
Amendment Transmittal
Date: October 11, 2005

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